

Building a Better Trojan Horse

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CHAPTER 1: THE URBAN WARFARE PHENOMENON

"To ensure the U.S. military has the ability to effectively operate on the urban battlefield, the CINCs and services must continue to expand their present efforts of study and understanding of the urban environment and must develop an integrated approach that optimizes key warfighting capabilities for future operations on urban terrain."—Defense Planning Guidance, FY 00-05¹, 1998

"Responsiveness has the quality of time, distance, and sustained momentum. Our threat of the use of force, if it deters miscalculation by adversaries, provides a quality of responsiveness all its own. We will provide strategic responsiveness through forward-deployed forces, forward positioned capabilities, engagement, and when called, through force projection from the Continental United States or any other location where needed capabilities reside. Wherever soldiers serve, we are part of the Nation's [sic] solution to its tremendous world leadership responsibilities."—Army Vision Statement, 2000²

INTRODUCTION

The pursuit of future urban warfighting capabilities has expanded to phenomenon-sized proportions in the last decade. The emphasis on meeting urban environmental challenges has achieved momentum in all services. As the Army transforms, it seeks to increase its strategic responsiveness as part of the joint team, being capable of more rapid and decisive support to the joint fight. At the intersection of these two important organizational azimuths lies the opportunity for new solutions to the joint urban operations. The challenge today lies in projecting the role future Army capabilities into the context of a joint urban operation.

BACKGROUND OF THE PROBLEM

Future urban operations at the operational level of war will be the responsibility of the joint commander. Although unilateral Army urban operations could occur in a major theater of war, the likelihood is rapidly diminishing. Many factors, however, from the tactical and strategic levels will converge to influence these operations. Strategically, cities have grown in importance as urbanization explodes worldwide, especially in developing nations where urban areas tend to be the hub of military, political, social, and economic power.³ In a field of warfare once governed

by the theory of avoidance, the gates of the city are opened once again for U.S. military action. This new strategic direction does not come without constraints. Nearly all of the recent commentary and study generated about future urban conflict confidently concludes that rules of engagement will always exist to restrict collateral damage and noncombatant casualties.⁴ The durability of U.S. policy is at greater risk within the urban battlespace. Studies suggest the “Clinton Doctrine” is more vulnerable to collateral damage and noncombatant casualties because its theory of national security policy is more “altruistic” and conceptual. They contend that the use of American military force under this “doctrine” is more vulnerable to public opinion,⁵ and that without more concrete national interests at stake, every tactical action may have strategic implications. An example of their arguments is the 3-4 October 1993 firefight in Mogadishu, Somalia, involving U.S. forces under Task Force Ranger and a mob of hundreds of armed Somalis. Despite the odds, nearly 14:1 against the U.S. forces, the special operations task force accomplished their mission and inflicted heavy casualties on the enemy—nearly 500 dead and 1,000 Somalis treated for wounds.⁶ Politically, however, the loss of eighteen Americans killed in the action forced the President to order the withdrawal of all American forces from the United Nations’ operation. Tactical actions had influenced strategic policy. Sean Edwards, a researcher at RAND, observes: “When events are closely monitored by the media, even minor tactical events can have strategic outcomes.”⁷ Other authors contend that the “Clinton Doctrine” is not a new strategic direction for U.S., and that employment of U.S. forces has always included a measure of humanitarian goals. They challenge that even World War II was humanitarian in nature, especially from the British point of view.⁸ Joint urban operations create an environment that places strategic security policy at greater risk, due to the density of tactical actions, proximity of noncombatants, and possibility of significant U.S. casualties. The joint force commander must contend with these challenges by organizing his force in the best way to accomplish the mission.

The Army allocates forces as directed for the joint commander’s force. Tailoring the right force mix for a future joint urban fight is an emerging complexity for Army commanders.

Complicating this fact, the Army's capabilities in joint operations are changing. In October 1999, Secretary of the Army Louis Caldera and the Army Chief of Staff, General Eric K. Shinseki, announced that the Army is pursuing an aggressive transformation program. One of the critical results pursued by transformation is a concept of increased *strategic responsiveness*, described as providing a "strategically responsive landpower force capable of dominance across the full spectrum of operations".⁹ New operations doctrine is also emerging to support this transformation. *Field Manual (FM) 3-0, Operations*, currently in DRAG Edition publication and in use by the Army's School of Advanced Military Studies (SAMS), will task Army commanders to now focus on their role in *unified action* (interagency, joint, and multinational operations) and what unique capabilities they provide the joint commander. FM 3-0 defines strategic responsiveness within seven "Attributes of Strategic Responsive Forces" which are forces that are "responsive, deployable, agile, versatile, lethal, survivable, and sustainable".¹⁰ As the Army sheds its Cold War perspective of operations and equipment, the joint force commander must redefine the role of transformed Army forces in his urban operations to leverage their capabilities to the best effect.

To win the joint urban fight, the joint commander's must use *operational art* to gain the best advantage in arranging his forces to accomplish the strategic objectives. A form of "nesting", he establishes links between tactical success and strategic endstate—in short, applying the available "means" in the most effective "ways" (campaigns/operations) to achieve the strategic "ends".¹¹ To understand the operational art is to understand the collision of theory, doctrine, and practice. Shimon Naveh, one of the leading operational theorists of the times, describes the operational level of war as generated by the "cognitive tension" between the "strategic aim and the adherence to the tactical missions"¹². The role of the joint operational commander, therefore, is like "the keeper of the sand", which he uses to balance the scales that hold strategy in one cup and tactics in the other. A miscalculation and the scales may tip out of balance and the tactical actions may not accomplish the strategic aim. This analogy illustrates that urban operations

introduce a problem of “balance”. The better the operational commander understands what factors contribute to “balance” at his level, the better prepared joint forces are for the urban operation. The importance of analyzing the problem of joint urban operations to determine these factors and generate solutions begins to gain momentum.

The intersection of matching emerging Army capabilities to the problems of the urban environment is the start point for new solutions to joint urban operations. The urban environment can only increase in importance for 21st Century joint operations. Like a bundle of nerves, urban areas provide a pressure point for the National Command Authority to apply military action. The density of decisive nodes within the urban environment gives it a refractive quality, distorting the results achieved from the effort committed. It’s a quality similar to one of Clausewitz’s observations about combat, where he described war like a “lens”, where the “light of reason is refracted in a manner quite different from that which is normal in academic speculation.”¹³ Military actions in urban areas tends to alter the action required out of proportion to the goals desired. As the joint force commander assesses new Army capabilities emerging from transformation, more options for operational maneuver in the urban environment will become available. Defining those options is the focus of this study.

STRUCTURING THE STUDY

RESEARCH QUESTION

Are there new forms of operational maneuver within joint urban operations that strategically responsive Army forces provide the joint commander? The study focuses on how strategically responsive Army forces contribute to the joint urban fight. It presents an analysis of writings at the operational level of war to determine operational patterns inherent to the joint urban fight. It discusses methods for Army forces to contribute to the joint urban fight, focusing on *operational maneuver* options enabled by transforming Army forces. Finally, it compares an historic case

study against a future scenario to put Army transformation initiatives in perspective within urban operations. The research goal is to provide Army-level operational commanders a tool to organize and equip strategically responsive forces for the joint urban fight.

RESEARCH METHODOLOGY

The research methodology is the roadmap for the study. The first step in describing the methodology is to set the scope of the problem. Urban conflict at the operational level of war is the domain of the joint commander. The study examines urban warfare as a subset of current joint military operations and campaigns. It assumes that the joint force commander will have either an urban area or areas within his theater of war, or his operation or campaign will have objectives that are located in urban areas. Army operational commanders may either provide forces as ordered to the joint force commander (JFC) or be designated as the JFC. In either case, the JFC must determine roles, missions, and objectives for an Army force assigned to his command. This study will focus on possible methods of employing them if the mission involves an urban environment *during or after* Army transformation is complete. The timeframe for this event is from 2010 to 2015, with the first objective brigade combat team (OBCT) available in 2010, the first objective division (ODIV) available in 2015, and the entire Army transformed by 2032¹⁴. During this period, the first objective division will be developed and have a capability of deploying as part of a joint force. Unlocking the key to employing these forces in a joint urban setting is the goal of the paper.

The research methodology attacks the question in the following ways. Initially, examine prevailing opinions on the characteristics of modern urban warfare by reviewing available articles, studies, books, and service doctrine (Chapter Two). Next, the study will assess the recently published (17 May 2000) joint publication *Handbook for Joint Urban Operations* (hereafter cited as JUO Handbook) to gain insight on urban operations at the operational level of war in the near-term (Chapter Three). Following that, the report offers a recommendation for

operational maneuver by Army forces in future joint urban operations (Chapter Four). Field Manual 3-0 (DRAG) defines *operational maneuver* as “placing Army forces and resources at the critical place in time to achieve operational advantage.”¹⁵ *Operational advantage* is further refined to mean *surprise, shock, momentum and dominance*¹⁶ by the FM 3-0, and these are selected as the criteria in the case study analysis to determine the new capabilities that the objective force provides in the joint urban fight. The conclusion (Chapter Five) reviews the findings and proposes concepts and questions for future study.

CHAPTER 2: OUT OF THE RUBBLE—RESOURCES AND THEORY FOR PLANNING JOINT URBAN OPERATIONS IN THE 21st CENTURY

“We run into a curious void in the literature of warfare. Those practitioners of the art who were also its ablest theorists, scholars, and writers dwelt on its varied aspects to the limit of their imaginations. One thing, however, they did not touch upon—combat where life is centered. Run through the list of writers and their works—Frederick, de Saxe, Clausewitz, Jomini, Kuropatkin, Bernhardt, Henderson, Foch, Fuller, Hart, et al. Not one has anything to say about military operations within or against the city.”—S.L.A. Marshall¹

“Urban warfare does not have its Clausewitz, nor is it ever likely to.”—Dr. Roger Spiller²

LINE OF DEPARTURE

The explosion of information on modern urban operations is impressive. The plethora of publications, periodicals, and manuals available today on urban operations far exceeds those available even as recently as OPERATION JUST CAUSE. As a measure of scale, twenty one urban warfare monographs and thesis papers were produced by students attending the Command and General Staff College’s School of Advanced Military Studies (SAMS) and Masters of Military Arts and Science (MMAS) program between 1966 and 1991. For a period of a quarter century, this ratio is just less than an urban topical paper a year. In the last nine years, thirty papers were written in the same field—at a rate of just over 3 a year!³ The imperative for change is clearly understood, and the body of thought on the urban warfare dilemma is increasing.

During the review of available references on urban operations at the operational spectrum of war, two interesting characteristics emerged. The first is that most of the professional military commentary on the operational level of urban warfare—papers and monographs conducted by students at service colleges—were primarily produced by students at the Army Command and General Staff College (CGSC) attending both SAMS and the Command and General Staff Officer Course (CGSOC). A search of available papers, monographs, and studies revealed that those generated by CGSC students alone were greater than the combined collections from the Army War College, the National Defense University, the Naval War College, Naval Post-Graduate School and RAND: forty nine CGSC reports generated from 1966-2000 against the thirty seven reports from other sources⁴. The other reason for an Army-centric collection of resources is the amount of analysis of operational-level MOUT issues appears to be greater from CGSC references than from the others, with the exception of the Army War College (AWC). The other characteristic is the lack of operational level discussion—most information on urban operations is restricted to the tactical realm. Additionally, most criticism generated about current doctrine refers to “World War II-era *tactics*”—not operations or campaigning.⁵ This may be linked to the acknowledged emergence in U.S. Army doctrine of operational art in the 1980s, as well as the categorization of the “operational level of war”. It may also be linked to a lack of understanding as to the linkage between operational commanders establishing the conditions for success for tactical actions. In summary, the defense community’s post-Cold War awakening has been characterized as a “search for relevancy”⁶ by some, but its momentum is gaining energy and inertia. Fueling the engine of change and transformation is the need for knowledge, predictive analysis, and emerging roles in missions in the 21st Century. Study in the field of urban operations has been no exception.

THE THEORISTS—CLAUSEWITZ, JOMINI, AND THE CITY

The study of urban warfare should begin by referring to classic military theorists. Since a number of modern doctrinal ideas and concepts—centers of gravity, decisive points, lines of operation, and theaters of war, to name a few—are derived from their works, their discussion of urban warfare in relationship to those important, basic concepts would be instructive. A cursory glance of the works of two great theorists—Clausewitz and Jomini—does not produce substantive analysis of urban *combat*, but this is misleading. The modern urban theorist should first realize that at the tactical level of war, Clausewitz and Jomini did not describe warfare in cities for several reasons. However, their theories in general provide insight to the operational-level commander executing urban operations. Their teachings provide a framework to describe the effects of urban areas in relation to operational forces and achieving their aims.

Clausewitz and Jomini probably did not discuss urban areas for several reasons. The first is the prevailing theory of war when they wrote. The Napoleonic influence was heavy in their work, and decisions for wars were being achieved by the clash of major armies in the field. Cities often appeared, like Konnigratz, as a march objective to orient converging forces, primarily due to the feeble road networks linked inhabited areas with very little branches or alternate routes. Cities and towns merely were waypoints to guide marches. The next reason they omitted urban warfare is the lack of real strategic importance of cities other than capitals and a few rare exceptions. The capitals of the major powers had strategic importance, and were discussed by Clausewitz and Jomini as centers of gravity. Possession or siege of a capital could normally lead to negotiations for peace. Jomini further opened discussion about capitals by relating their importance as not only geographic but strategic to the country as a whole, calling them *decisive strategic points*.⁷ He stated “I think the name *decisive strategic point* should be given to all those which are capable of exercising a marked influence either upon the result of the campaign or upon a single enterprise.”⁸ Therefore, a city which had strategic importance was worth campaigning against, but those without a link to the political aim of the war would be merely *strategic points of maneuver*.⁹ Other reasons that Clausewitz and Jomini did not discuss urban

warfare were: (1) the industrial importance of cities had not emerged, (2) there was a general parity of force between the great powers, giving no great advantage in the theorists' eyes to tying forces down to street fighting, and (3), the occupants of very few cities would withstand a siege or occupation before capitulating to prevent massive damage, which was hard to repair with any timeliness. City fighting in Clausewitz and Jomini's time was simply not an operational option with much promise. It would tie an attacker down in a long siege and the defender would immediately lose his initiative upon being encircled.

For the operational commander, it is more important to study what urban areas mean in the context of Clausewitz and Jomini's greater theories. The first discussion centers around Jomini's theory about the geography of war. It is important that Jomini discussed different points within a theater. He determines that the possession of a geographical point means nothing unless the commander can see its importance in relation to his mission. He even goes so far show how *geographical strategic points* become *decisive strategic points*, how *strategic points of maneuver* become *decisive strategic points*, and the differences between *objective points of maneuver* and *geographical objective points*.¹⁰ Jomini provides an operational level analysis of what a city means to the commander. If the relation of mission to city is high enough, forces must be apportioned to either seize it or protect it. Jomini further develops this idea in his section on *Frontier Defense by Forts and Intrenched Lines; Siege*, where he writes:

While a fortified place itself rarely absolutely prevents the progress of an army, it is nevertheless an embarrassment and compels the army to detach a part of its force or to make detours. Formerly the false system prevailed of encircling a city by a whole army, which buried itself in lines of circumvallation and contravallation...Experience has proved that the best way to cover a siege is to beat and pursue as far as possible the enemy's forces which could interfere.¹¹

The next critical link from modern urban warfare to classic military theory is Clausewitz's discussion of military decisions and time. The problem of urban areas distorting time for a force is evident in many writings, but Clausewitz's Chapter Twelve of Book Three illuminates the

problems faced by forces applied in urban environments. He writes that tactical forces are “used successively”¹² due to the energy expended by the tactical echelon in an engagement rarely giving it the ability to pursue or continue the fight. On the other hand, “strategy knows only simultaneous use of force” and success at the strategic level often “lies beyond that phase”, referring to the outcome of the engagement.¹³ His discussion moves to the fact that “fatigue, exertion, and privation” introduce “separate destructive factors” at the tactical level that are not perceived at the strategic level, where “time and space are enlarged”¹⁴ This effect has resounding implications for the joint urban fight. If the operational commander does not plan for a higher density of tactical actions over time occurring in an urban battlespace, he risks becoming too focused on the urban fight. Overall, Clausewitz’s correlation of duration to outcomes is critical in a theoretical examination of forces within an urban operation. The last key theory linked to classic thought is the position of the enemy force in relation to the city. In Book Seven, Chapter Fifteen, Clausewitz describes seeking a decision in the attack on a theater of war. He describes key issues. The first is that “victory presupposes an attack of the two main forces”¹⁵ The leverage from this argument is that if the attack forces the defender to fight before he is prepared, the advantage is normally to the attacker. Again, a sense of time is achieved by his writings. This idea has implications for a strategically responsive force that can lodge itself in a theater *prior* to the decision by the enemy to act. The enemy’s options are then to attack immediately or he is forced to defend against the momentum of the deploying force. The second issue discussed is should the capital (or similar center of gravity) be the objective, the attacker has more advantage striking “the communications between the enemy army and its capital and there seek the victory that will bring him to the city.”¹⁶ This returns to Jomini’s idea of avoiding the strain of encirclement, if it is even possible, of a city and seek to destroy the enemy that is tied to by mission or purpose.

Taken as a whole, the classic works of Jomini, Clausewitz, and others do not specify how to win an urban operation. But the criticism of the relevance of their works to modern urban

operations is done at risk. The critics must see the urban area in the larger context of what the classic theorists say about warfare, and in pursuit of victory, determine how the city either prevents or aids accomplishment of the mission.

THE COMMENTATORS —ARTICLES, PAPERS, MONOGRAPHS AND STUDIES

The first body of resources provides the most polarized views of contemporary MOUT, the loudest unilateral call to action, and some of the most penetrating analysis. “The Commentators” are either military professionals, defense analysts, researchers, or professional journalists. They are connected by a common interest in the defense establishment’s progress in improving urban operational capabilities. Some approach the problem like Clausewitz’s dreaded “reductionists”¹⁷—to disassemble urban warfare and examine its parts to determine basic fundamentals, generate simple mathematical relationships, and then reassemble them into an understanding of the whole. Other writers take a “systems” approach, understanding the urban operational environment a “system of systems.”¹⁸ By dividing the body of commentators into “reductionists” and “systemists”, a better understanding of the whole body of commentary is possible. Neither category is more persuasive than the other, but the analysis will yield some arguments that are stronger from an operational standpoint made by the systemists, especially when dealing with the operational art and the arrangement of forces within space and time to achieve purpose.

THE REDUCTIONISTS

The reductionists succeed in quantitatively analyzing the problem of urban warfare to support their hypotheses. Many of the historical analyses of previous urban conflict conform to the reductionist approach. The approach involves the following steps: (1) describe the chronological or key events of a past urban operation, (2) determine what factors were dominant in the final decision, and (3) offer those factors as rules or principles of urban operations. The

strength of this approach is the detailed analysis required over time to achieve some common themes from each case. The weakness is the lack of analysis of the relationship *between* the factors to understand how they interact to comprise the whole experience.

One reductionist study of urban combat is the McLaurin report ¹⁸. Commissioned in 1987 to provide input for updating a lessons learned from recent urban combat, the report selected twenty two battles from 1945 through 1982 to determine what factors could guarantee a more than reasonable chance of success in urban combat. The variables it examined included city size, duration of combat, and type of war all the way to presence of air and naval support. The summation of the study was largely inconclusive determining *patterns* in MOUT¹⁹, but did endorse some prevailing views of MOUT at the time of publication. The main points were:

1. American forces should avoid cities where it is feasible.
2. An attacker should encircle and isolate a city when possible.
3. Airpower's important role is to cut off the city defenders from sources of supply and reinforcements.
4. Armor has a definite role in MOUT. Armor and APCs must have dismounted protection, however.
5. Self-propelled artillery can be used to great effect as a direct-fire weapon in close combat.
6. Airpower and artillery can have a positive psychological effect.
7. The defender has a "good chance to win or at least prolong the battle and raise the cost for the attack" if casualties and/or collateral damage can be limited.
8. Combined arms operations have the best chance of success, especially when armor, infantry, and artillery train and develop doctrine together.
9. Planning and intelligence are crucial to the outcome. Most defender "wins" were due to attacker intelligence failures.
10. Preparation of the city was probably most critical for defender success.
11. In no single case did casualties in the city itself alter the campaign outcome.²⁰

The McLaurin report exemplifies a research team dissecting the problem of urban warfare to determine *what* elements exist in *most* cases, rather than *how* the elements interact in *specific* cases. The conclusions of the McLaurin report equate to a series of battalion battle drills which must be included on a checklist to execute MOUT. Another reductionist commentator was R.J.

Yeoman²¹. Yeoman's report for the Marine Corps Development and Education Command in 1983 developed some more flexible solutions to securing a city than McLaurin by putting the variables into the context of a deliberate decision-making process. He suggested the following reasons: (1) deliberate attack to seize the entire city; (2) attack to effect isolation and containment of the city; (3) attack only key objectives within the city; (4) attack to clear only one or more critical corridors to allow unimpeded friendly mobility through the city; and (5) attack to reduce and destroy specific defenses within the city.²² Again, the reductionist approach proves helpful for organizing a combined arms team and training them to accomplish specific roles within the urban operation for the unit, but never fully examines the effect that the identified variables generate as they interact within the urban battlespace.

THE SYSTEMISTS

The "systemists" approach urban warfare from a more holistic standpoint. Clausewitzian scholars probably recognize this method as not just analyzing "cause and effect", but an attempt to understand history from the commander's point of view—what decisions could he realistically make?; Why?; What information was not known?; Why?; What did the enemy know?; etc. It is also an approach that attempts to understand the relationship between the stated goals and aims and the actions. This body of commentators bears some detailed analysis.

Major Richard Francey, a SAMS graduate from 1996, produced a monograph that is noteworthy in the systems approach to understanding MOUT called *Urban Anatomy: The Fundamentals of a City*²³. The systems he describes are the physical composition, the supporting utilities and services, and complex social cultural factors.²⁴ The critical advantage of this approach over reductionism is that Major Francey discerned that the *relationship* between those subsystems defines the city as well. By examining his approach, the nature of a city as a "system of systems"—literally, containing three major and hundreds of subordinate systems—functions

because the relationship between all these components are established. Francey's key conclusion is that the operational commander's biggest challenge is "simultaneously removing the hostile threat while maintaining a state of normalcy."²⁵

Dr. Roger Spiller, the Marshall Chair of Military History in the Army's Combat Studies Institute at CGSC, furthers the systems approach in his essay on urban conflict, *Sharp Corners: Urban Warfare at Century's End*.²⁶ Dr. Spiller's analysis of cityscapes expands the hypothesis that an operational commander who discerns the relationships between micro- and macrosystems within an urban environment is at a distinct advantage.²⁷ Dr. Spiller describes the very "humanness" of a cityscape—the fact that it was created by humans to provide social, economic, cultural, and basic functions—as the reason a commander can discern its design and *thereby apply the precise force at the precise location*.²⁸ From a military perspective, this observation means that the commander that understands the city as a system, can manipulate the system through forces available. Extrapolated, the forces needed may be smaller in number and more precise in function. Ponderous masses of forces thrown at an urban area to achieve a decision by sheer weight is not an example of this manipulation, as was seen in Stalingrad, Aachen, and Chechnya. His analysis also demonstrates that at some point, mass works against the attacker. Cityscapes are not conducive to large masses of military force. Because a city is designed to channel and direct movement in everyday life, it tends to have the same effect on the military force. Commanders are used to moving relatively freely on open terrain—the urban terrain imposes order that must be incorporated into the plan.

Dr. Spiller provides the commander with five common features of the urban environment²⁹. A city's *humanness*, describes the way it facilitates interaction—U.S. forces will achieve more success by shaping the relationships within the system rather than severing them. Next, the city is a *highly dynamic environment*, possessing its own pulse and rhythm of events, such as commuting for example. Commanders that chart this rhythm can better determine not where to act but *when*. Third, *cities persist*. Stalingrad survived World War II and was renamed,

but civilians lived, albeit terrified, within its confines even in 1942 during the famous battle held there. Mogadishu has not disappeared as a city, despite its lack of organized urban cohesion. During the "Blitz", Dr. Spiller observes that one million commuters still reported for work every day in London, traveling to the city daily despite the aerial "siege" imposed by the Luftwaffe³⁰. Fourth, a city is *built to function in peace*. The first cities were designed for self-defense, erecting walls, creating gates, and suffering sieges. The modern metropolis isn't designed by urban planners to repel barbarians, and lay open and accessible to any military force. This characteristic coincides with the last—a city's *urban cohesion* has figured prominently in urban warfare. For a city to maintain all its basic characteristics, it establishes some sort of entity to manage its cohesion. This is always a civilian authority with support by the city's public services. When military force is applied to the urban environment, however, a *transition* occurs to military authority. This idea ties back to Francey's notion of removing the threat while maintaining normalcy. If the operational commander can establish his control over a city *before* the transition to military control occurs, the likelihood of success is greater, because the city does not convert all its functions for military use. A house is simply a dwelling until engineers add sandbags, barbed wire, command-detonated mines, boards, nails, etc., at which point it becomes a strongpoint. Therefore, the transition from a civil cohesion to military cohesion is extremely important to monitor and is a *time standard* by which the joint urban commander can measure his responsiveness within his plan.

The systems approach espoused by Francey and Spiller has gained support by some of the services. Major General (MG) Norton A. Schwartz, Director of Air Force Strategic Planning and the Deputy Chief of Staff for Plans and Programs, spoke about the systems approach in his briefing to the attendees of the RAND—Marine Corps Warfighting Laboratory—J8/Urban Working Group Urban Operations Conference, held 13-14 April 1999 at Bolling Air Force Base, Washington, D.C.³¹ During his briefing, he sought to describe the emerging roles of aerospace power in urban environments, and he compared the two prevalent schools of thought on

approaches to urban operations. MG Schwartz described first as the “land-centric” school which advocated a methodical, physical, and exhaustive approach of close-combat, high manpower, and very decentralized operations. His slides depicted Army infantryman fighting individually and with tanks in a MOUT training site. The second school of thought was the “systems centric” approach to urban operations, to enable “control an adversary without necessarily introducing a large ground force.”³² He also described a city as having “archived and susceptible” key nodes that are vulnerable to “operational effects” vice “territorial” effects within a joint urban operation.³³ His briefing then introduces the role of aerospace forces using a systems approach to urban warfare that is convincing and insightful. Key for this paper, however, is the relevance to strategically responsive forces which will be lighter, have a smaller footprint, and rely on enabling technology to generate the effects of larger legacy forces.³⁴ Further discussion on this topic will follow in the summary section for application to the research question.

THE CGSC/SAMS PAPERS, RAND, AND THE NEWSPAPERS

Prior to concluding the discussion of urban warfare commentary, three special categories of commentary need interpretation. They are the CGSC MMAS research papers and monographs; the RAND studies; and the newspaper columnists. These three distinct groups of urban warfare commentators have generated the largest impact and have secured the most vocal niche within the body of writings.

The yearly MMAS papers and monographs CGSOC and SAMS students constitute a large proportion of the professional commentary on modern urban operations. They tend to reflect the shifts in military affairs over time. Early works in this group discuss European Theater urban operations within the context of AirLand Battle theory. The focus of writings shifts in the early eighties to employment of light infantry divisions in the support European Theater urban operations, occurring around the time when the light infantry division concept was fighting for

recognition. The papers then analyze attack helicopters and armor units in MOUT around 1990-1991. The obvious motivation for these writings are the events from OPERATION JUST CAUSE involving newly fielded AH-64 helicopters in support of the Ranger units seizure of Rio Hato, and the use of light armor in Panama City against the Comandancia. Then, in 1994, an explosion of urban writings at CGSC occurs following the 3-4 October 1993 firefight in the streets of Mogadishu, Somalia. Discussion of precision fire support in MOUT also coincided with this group of monographs. Finally, urban domestic support operations is the theme for at least four CGSC papers following the Los Angeles riots. The works by CGSC students and SAMS students on urban topics that were sampled spanned thirty four years, from 1966 to the present. Several themes are common throughout all the CGSC papers. Papers written after the invasion of Panama seek answers for a power projection, offensively-oriented campaign involving urban areas. They recognize that forward bases were diminishing and CONUS forces would be decisive in future joint urban operations. Next, they voiced concern over limited war and the impact of rules of engagement (ROE) that emerge in every MOUT situation. Finally, monographs written post-Cold War unilaterally recommend updating the 1979 version of FM 90-10, recognizing its predilection towards avoidance of cities if possible, its tendency to use high intensity urban operations when required, and its total lack of discussion on support and stability operations. The SAMS and CGSC papers provide the body of urban warfare commentary with timely, in-depth analysis with logical recommendations and conclusions. The authors are motivated by their experiences and encouraged to tackle contemporary military affairs. SAMS and MMAS authors enrich the body of work on urban operations because they see the implications of the rigors of urban combat from the military professional's viewpoint. Clausewitz discussed in his work, *On War*, why the point of view of military professionals advances the body of military theory:

Action in war is like movement in a resistant element...To those who are not thinking of swimming the motions will appear grotesque and exaggerated...theorists who have never swum, or

who have not learned to generalize from experience, are impractical and even ridiculous.³⁵

SAMS and MMAS contribute an important perspective to the body of urban warfare study.

The RAND Corporation and its researchers have contributed greatly to the field of urban warfare and deserve mention. Lead by Dr. Russell Glenn, an acknowledged expert in the urban combat field of study, the RAND researchers have been steadily producing a number of very quantitatively-based reports on the emerging MOUT dilemma. Sponsored through research contracts by the Office of the Deputy Assistant Secretary of the Army for Research and Technology, RAND's Arroyo center contains the Force Development and Technology Program that is managing the urban warfare research. Also, the RAND researchers have joined forces with the Dismounted Battlespace Battle Lab (DBBL) at Fort Benning, the Marines Corps Warfighting Laboratory (MCWL) and the J8 Urban Working Group from the Joint Staff (J8 UWG) to co-sponsor several conferences on the topic of identifying, analyzing, and conquering the difficulties of future MOUT. The reports and conference proceedings express three major themes. The first is the view that the U.S. military, especially the Army, is not prepared now for future MOUT, reinforced repeatedly by case studies and examples in their work. While no current battalion and brigade commanders are quoted as stating their units being unready for MOUT, the studies project several variables working against the readiness for MOUT. The first is doctrine. RAND observes that the current MOUT doctrine is antiquated and based on World War II experiences, and teaches lessons and approaches to MOUT that are not applicable. This problem is exacerbated by the second reason: equipment that is unsuitable for MOUT. The researchers observe that the military has been procuring weapons to fight a Cold War-era threat, primarily armored battle on open terrain. The RAND reports observe that:

Current and near-term military technologies do not provide the soldier and marine with firepower, support, or command and control that close urban operations demand.³⁶

The reports conclude that low-tech weapons will work just as well in MOUT, and many current high technology systems do not. An interesting paradox is observed by RAND researcher Sean Edwards in *Mars Unmasked*:

Because urban warfare is primarily an infantry fight, it is a form of warfare that lends itself least to the application of advanced technology. Force XXI will not significantly increase the lethality of the average infantryman...Force XXI modernization will increase the firepower of armor and artillery, but in many cases large-caliber cannons and rockets are not discriminating enough for the ROE typically exercised on the urban battlefield.³⁷

Mr. Edwards makes an interesting observation that dovetails with the last problem facing U.S. MOUT readiness: political constraints imposed through rules of engagement (ROE). RAND studies conclude that the U.S. military's ability to adapt on the future MOUT battlefield will be curtailed by the limitations of ROE and political will. RAND presents a picture of U.S. forces unable to apply its full capabilities because current doctrine does not provide for more subtle methods to conduct urban operations. They submit that preventing wide scale collateral damage and noncombatant casualties are the two main reasons for ROE.³⁸ This point of view is certainly timely and accurate, but it is not unique to MOUT. Nearly every war in the 20th Century has witnessed political restraints, even if they were not directly called "Rules of Engagement". ROE has become associated with restricting the military's ability to fight to its full potential in small scale contingencies and United Nations missions, but it was even present in World War II. The Commander of the U.S. VII Corps in World War II, assigned to seize the city of Aachen, issued an ultimatum to the German military commander, a Colonel Leyherr, in hopes of sparing the city from devastation. Unfortunately, Colonel Leyherr *also* had political constraints: he was prohibited by Hitler from surrendering!³⁹ A more modern example is the raid in Mogadishu on 12 July 1993 in retaliation for the Pakistani convoy ambushed by Somali gunmen, leaving twenty four Pakistani peacekeepers dead. U.S. attack helicopters fired sixteen TOW missiles into a compound containing about a hundred Somali clansmen conducting a meeting. The effect was to

unite the warring clans loosely under Aideded, the strongest of the warlords, against the U.S. peacekeeping force.⁴⁰ The fact that urban conflict across the spectrum of operations will be curtailed in scope by political rules of engagement is important but not unique to MOUT, and the RAND research may seek to reassess this assumption with the emergence of new doctrine. Taken as a whole, all the research done by Dr. Glenn and the RAND Arroyo Center is valuable and beneficial to informing the military about the MOUT threat.

The last category of special commentators on modern urban warfare is the newspaper and professional journal writers. They reflect the public's concern about future urban warfare in many recent essays. The overall impact from these essays is a greater sense of urgency placed on the military to provide solutions or programs that fill the capability gap in MOUT. The other consistent theme is the comparisons made amongst services and progress reports on which service is making the most MOUT improvements. Mr. Tom Ricks, writing for the *Wall Street Journal*, has been fairly vocal about the Marine Corps advances over the Army in regards to urban warfare training strategies and doctrine.⁴¹ Mr. Sean Naylor, writer for the *Army Times*, is constantly providing the Army's progress in improving MOUT capabilities. Mr. Naylor's point of view is that the Army's efforts seem to be mostly talk without action. He demonstrates his opinion in a 20 November 2000 article entitled, "Newest MOUT Site is Top-Notch But Underused":

The Army's newest urban combat training site is also a prime example of the service's ambivalence toward city fighting. The Army spent more than \$15 million to build the Zussman Village Mounted Urban Combat Training site, which opened here [Fort Knox, KY] in April, and got its money's worth...Nevertheless, active-duty tankers aren't exactly falling over themselves to take advantages of the site. In fact, not a single active duty tank or mech[inized infantry] unit has scheduled training here.⁴²

The point Mr. Naylor makes is painful for Army leaders, but he achieves his purpose of uncovering inconsistencies with the Army's stated aim of MOUT improvement. Other writers, in a much smaller group, seek the strategic importance of MOUT. One example is Mr. William

Hawkins writing in *Army Magazine*, who ties the National Defense Panel's 1997 report on the defense department's need to transform with future U.S. urban operations. He observes that the NDP report emphasizes "ground combat forces should continue to be cut in favor of more long-range, precision-strike systems" with a disastrous effect on the ability to conduct urban operations.⁴³ Mr. Hawkin's observations are penetrating, because he notes that despite having a policy of engagement, the defense establishment is opting for approaches that steer away from capability to conduct limited war—a type of war that may include or require urban operations. Together, all the journalists cited represent a small slice of the prevailing concerns offered monthly in many of the nation's periodicals and newspapers. This study concludes that professional journalists will continue to query and challenge the defense establishment about their abilities to conduct MOUT a future conflict involving urban operations answers their questions.

THE MILITARY—SERVICE DOCTRINE

"All we had available to us for references during the planning stages of OPERATION JUST CAUSE were the Army's FM 100-5 and FM 90-10. Unfortunately, both of those were written for a battle in Western Europe versus the Soviets, not a light JTF attacking a country."—Brigadier General David Huntoon, lead planner for OPERATION JUST CAUSE for XVIII Airborne Corps⁴⁴

Doctrine's job is to translate theory into practice. The Army's emerging capstone manual, FM 3-0, defines doctrine as "the concise expression of how Army forces contribute to unified action in campaigns, major operations, battles and engagements."⁴⁵ The definition implies: (1) doctrine is not restrictive to the user; (2) the joint, multinational, and interagency nature of the operational level of war—also known as "unified action"; and (3) the nesting of purpose from operational through tactical actions. The operational commander must understand the service doctrine before he can advance in conducting his operation. A critical review of the Army, Marine Corps, and Air Force approaches to MOUT through their service doctrine follows. The Navy places the Marines Corps responsible for urban operations.

ARMY

The Army stands ready to publish new urban operations doctrine. The current manual, FM 90-10, is based on a threat using Soviet-based doctrine. The best manual for Army operational commanders is FM 90-10-1, *An Infantryman's Guide to Combat in Built-Up Areas*. This reference, combined with lessons learned bulletins from the Army's Center For Army Lessons Learned (CALL), comprises the most in-depth doctrine for urban operations.

The title for FM 90-10-1 suggests more than a new name for urban operations—Combat in Built-Up Areas—it announces a break with FM 90-10. Published in May of 1993, just five months prior to the firefight in the streets of Mogadishu, the manual does not contain a single reference to FM 90-10, including the reference appendix.⁴⁶ It elaborates on the significant shortfalls of FM 90-10, in particular, redefining the spectrum of MOUT operations from only high-intensity to include *surgical MOUT* and *precision MOUT*⁴⁷. The definitions broaden the models for Army units conducting primarily tactical urban operations. *Surgical MOUT* is defined as:

High risk operations...that require near-surgical precision including special purpose raids, small precision strikes, or small scale seizure or recovery of personnel or equipment...usually conducted by special mission units and may involve cooperation by other U.S. or host nation forces or police...regular units...may support it by isolating the area or providing security or crowd control.⁴⁸

The raid in Mogadishu on 3 October 1993 is a perfect example of surgical MOUT. Ranger units, although part of the special operations community, isolated the objective area with a light infantry company providing quick reaction force capability to reinforce. The actual execution of the raid was left to special purpose units who worked uninterrupted due to the Rangers excellent security operations. It was only after the raid that the Somali population began their opposition but were not able to free the captured individuals from U.S. custody.⁴⁹ *Precision MOUT* is defined by the manual as:

Combat actions...against an enemy force that is thoroughly mixed with noncombatants and when political considerations require ROE...more restrictive than high intensity MOUT. Infantry units of all types must routinely expect to operate in precision MOUT conditions...it is marked by a conscious acceptance of US forces of the need to focus and restrain the combat power used. The political situation may demand different TTP [tactics, techniques and procedures], tighter ROE, and strict accountability for individual and unit actions.⁵⁰

Mr. Sean Edwards defines OPERATION JUST CAUSE as a precision MOUT operation⁵¹. All the elements defined by FM 90-10-1 were certainly in evidence. Produced prior to the concept of “unified action” was introduced in FM 3-0, it nicely compliments that concept by acknowledging other U.S. agencies and multinational operations. However, comments made earlier remain valid: every war has required political definition of the strategic endstate, whether it was clear or vague is notwithstanding. The repeated theme of concern over ROE in MOUT suggests the Army’s own reluctance to admit that superior firepower is the proscribed answer in all doctrine, and that it must specify to Army leaders the need to include ROE constraints. FM 90-10-1 contributes a few other salient points to the body of urban doctrine. It provides expanded roles and missions for combat support and service support elements in MOUT.⁵² A constant theme of combined-arms in urban operations permeates the manual, to its credit. The manual spans the needs of an individual soldier through a division commander. It prefaces each chapter on offensive and defensive MOUT with reasons why the commander *should* and *should not* accept battle in urban conditions, a significant azimuth change from 90-10’s “avoid or flatten strategy”. It becomes very technical in some portions, specifically, in Chapters Five (“Fundamental Combat Skills”), Eight (“Employment and Effects of Weapons”), and the Appendices. Appendix B introduces the Bradley Infantry Fighting Vehicle to the MOUT battlespace with TTPs on its use. Finally, FM 90-10 addresses the “Legal Aspects of Combat” in Chapter Seven, encompassing the non-combat aspects of interacting with a civilian authority in urban operations.

The weaknesses in FM 90-10-1 are few but glaring. The manual references AirLand Battle Doctrine as the core operational doctrine of the Army. The manual makes two contentious

comments in the section titled, "Operational Factors". The first is that urban combat is "only combat in different terrain. Urban combat consumes **time** [emphasis in text]"⁵³. Natural terrain does not interact with the combat force, as Dr. Spiller advances in his essay.⁵⁴ If infantry forces want to move through a densely wooded area, they may, at a reduced rate of march. If they wish to move any direction other what the city network defines, they must use other arms and considerable effort to reduce buildings. Next, the manual suggests "if the attacker is subject to any constraints, the defender has a good chance of winning or prolonging the battle"⁵⁵ This is one of the key challenges that studies in the nineties has been attempting to tackle. Although it bears mention, it is a condition of combat that has existed since Napoleon. Despite its shortcomings, when coupled with CALL Newsletter 99-16, *Urban Combat Operations*, FM 90-10-1 is the best doctrinal reference available for Army operational commanders in MOUT.

MARINE CORPS

The United States Marines Corps is taking the lead in joint urban operations. Publishing their current manual in 1998, the Marines have also been tasked with the lead in developing joint urban doctrine.⁵⁶ Marine Corps Warfighting Publication (MCWP) 3-35.3, *Military Operations on Urbanized Terrain (MOUT)*, proved became the standard by which other doctrine was judged. As appraised by Dr. Glenn at RAND in 1998, his recommendation in the urban study *Marching Under Darkening Skies*" asserts:

Adopt Marine Corps Warfighting Publication (MCWP) 3-35.3 as the initial foundation for Army and joint MOUT doctrine pending the creation of more comprehensive documents.⁵⁷

MCWP 3-35.3 is comprehensive, contemporary, and concise. Its target audience is the tactical level, and it focuses on the Marine Air-Ground Task Force (MAGTF). It is the first service manual to emerge after Chechnya and incorporates lessons learned from Somalia as well. From a comprehensive review, several observations emerge. The first is that Marine Corps doctrine writers modeled their manual from FM 90-10-1. The layout and many appendices match FM 90-

10-1, which preceded it, almost exactly. The influence is evident in shared pictures and headings, and there are few features to distinguish it as an amphibious force manual, other than discussion of naval gunfire and Marines Corps air support. A criticism would then focus on changes to make the manual more oriented towards the *littoral urban area*—the emerging threat areas that the manual reminds the user about in the beginning. It warns MAGTF commanders that they will likely be called upon to accomplish their missions more often those areas. MCWP 3-35.3 serves as a doctrinal twin to FM 90-10-1, and a very useful body of doctrine on contemporary urban operations

AIR FORCE

Although the Air Force does not have a manual officially designated as “urban operations”, their service is in tune with urban warfare challenges. The Air Force efforts for urban doctrine currently fall under the 422nd Test and Evaluation Squadron, and is titled “Tactical Airpower Applications in Urban Close Air Support (UCAS)”⁵⁸. Air Combat Command has designated the testing Project 96-561FR and it generally focuses on the *target marking, aircrews and terminal controller skills*, and *appropriate ordnance* conditions for effect CAS, as established in Joint Pub (JP) 3-09.3, *Joint Tactics, Techniques, and Procedures (JTTP) for Close Air Support (CAS)*.⁵⁹ The results thus far were reported by USAF Major Brooks Wright during the J9 UWG-RAND-MCWL conference in April of 1999. He stated that test was providing pinpoint CAS capabilities to aircrews and tactical air control parties (TACPs) to better support the ground operations in the urban environment.⁶⁰ Aerospace power contributes well in urban operations, and has been present in every major urban operation in the recent decade. Providing aerospace superiority, battlespace awareness, rapid mobility, and precision firepower (the focus of the test)⁶¹, the Air Force is significant to the JFC’s urban fight. Joint doctrine will most likely not trigger any changes to Air Force doctrine by causing the creation of a new manual, but new TTPs will emerge and be added to existing operations manuals. The key for the JFC is understanding

that aerospace power works best in concert with a “systems” approach to the urban environment, because manipulation of nodes and the conduits that connect them (subways, phone lines, etc.) is better suited to aerospace forces than ground forces in most occasions. The problems that aerospace forces encounter in MOUT—as mentioned above—are manageable with proper air-ground training and coordination through the Joint Force Air Component Commander (JFACC).

THE SUMMARY—A BODY OF THEORY OR COLLECTION OF MYTHS?

The review of available urban warfare literature begs definition: is it the foundation of a body of theory or a subset of general military theory? Throughout the discussion, patterns of modern urban warfare theory have emerged. The body of theory may not have its Clausewitz, as Dr. Spiller’s quote alluded to, but it contains some key theoretical concepts.

To begin, *a friction occurs at the operational level when strategic goals collide with tactical logic concerning urban operations*. The multitude of examples used to warn about political restraints and ROE serve to identify the contradictions that still exist in urban operations. Tactical doctrine has counseled avoidance or overwhelming firepower for MOUT up to 1993, when FM 90-10-1 introduced the *surgical* and *precision* MOUT models. Yet, a predilection towards better stand-off capabilities within Force XXI formations and precision guided munitions still pervades the acquisition programs and operations doctrine. At the tactical level, caution and methodical operations will guide MOUT actions, while at the strategic level, a decisive victory while riding the momentum of public support is required. This will continue to create friction at the operation level of war.

Next, *an urban area under military control is more restrictive than under civilian control*. This issue describes the need to act rapidly, before the urban area is converted to military purpose, and to engage in an analysis of the factors that create “urban cohesion” within each urban area. Once the transition occurs from civilian to military (or even paramilitary, as in Somalia) control, a city can become a stronghold.

This leads another theory, that *occupation of a city is never equal to control of a city*.

The literature shows that the military force must gain the assistance of the civilian authorities as quickly as possible to achieve “control”. The forces who deployed to Panama quickly reinstated a president who announced compliance with U.S. forces, as well as the forces forward deployed to Panama knowing the local authorities prior to the operation. This greatly assisted the JTF by gaining legitimacy in the country quickly.

From the context of a campaign, *urban areas compress the factors of time, actions, and decisions which leads to HQs at a higher level of war to control the urban operation*. With more actions occurring, more control is theoretically needed. More control may result in more HQs required or a more sophisticated HQs operation. The issue is that the operational level of war may be more applicable in contemporary military affairs thanks to the urban environment. If a piece of urban and open terrain are compared side by side, it is more likely that a smaller unit can achieve the same effects in the open area. The span of control increases by a factor of almost five in the same space on urban terrain. More forces applied means, theoretically, a higher level of control. The complications of increased density of actions, less transition time between actions, and more decisions required in urban operations may require a higher level of HQs committed than other actions. This characteristic virtually completes the argument that all urban operations must be joint at the operational level of war.

Mass reaches a point where it works against itself in urban areas. The application of more mass—units, vehicles, bombardment—reaches a point where it begins to affect the momentum of the attacker. The only exception to this rule appears to be command and control nodes and logistics support. OPERATION JUST CAUSE had tremendous mass (26, 000 soldiers) but it was dispersed over twenty six targets, preventing the forces from contradicting each others’ effects.

Dr. Spiller’s writings contribute an important emerging concept. *Cities maintain two signatures: the physical and cybernetic. Both must be analyzed for a viable urban operation.*⁶²

Dr. Spiller refers to the characteristic of an informational signature, resident in the city ordinances, the civilian government's hierarchy, the news organizations, and the cyber world that provide "invisible avenues of approach" to the joint force commander. Access to this cybernetic signature is gained through joint information operations and is a component of the joint commanders combat power.

Finally, and most importantly to U.S. forces, *operational initiative is always in favor of the attacker*. This is curious to note since U.S. forces will always deploy to an operation involving MOUT to include domestic support missions. They will seek to achieve a decision in most cases, versus the defender who will seek to avoid it. The majority of prevailing commentary on the topic of MOUT concerns a U.S. force attempting to gain "access" to targets in an urban environment. But it is the defender who surrenders his initiative at the operational level by choosing to confine his position within a city.

The body of thought on urban operations comprises an important base from which to examine the current joint handbook for joint force commanders. It identifies the needs that the handbook must address and which may need refinement in future joint urban doctrine, JP 3-06.

CHAPTER 3: JOINT URBAN DOCTRINE—EMERGING CONCEPTS AT THE OPERATIONAL LEVEL OF WAR

"In the past, the criterion for victory during combat operations in an urban areas was the defeat of the enemy; during urban MOOTW, it was the successful completion of the assigned military task. Today there are additional criteria for victory and/or mission success in an urban area. Foremost among these is the heightened emphasis on keeping collateral damage to the urban area's civilian populace and infrastructure to an absolute minimum."—Handbook for Joint Urban Operations, 17 May 2000¹

"...the JTF commander [must] act as a surgeon: his operational campaign must cut away the cancer without killing the patient".—LTC Rick Megahan²

Joint urban operations doctrine is the last pillar required to support joint urban operations. Alongside service doctrine and national military strategy objectives, it fills a much needed gap in the library of the joint commander. This chapter examines the current publication, which is not

doctrine but an informative handbook, and the options provided to the operational level commander.

GENESIS OF JOINT URBAN DOCTRINE—J8 URBAN WORKING GROUP

The *Handbook for Joint Urban Operations* was published in May 2000 through the efforts of the J8 Urban Working Group (UWG), established in November 1997³. Their charter was to bridge the gap between commentary and doctrine by providing joint urban operations doctrine to the force. The UWG was tasked to provide the Joint Requirements Oversight Committee (JROC) a study on MOUT with the focus on relevance to joint operations; alternatives to current approaches; doctrine needs; survey available analysis, modeling, and simulation tools for joint MOUT; and identify joint operational mission needs for MOUT.⁴ The UWG swelled in numbers and contains representatives from DOD agencies, the services, the Joint Staff, the CINCs, and State Department, as well as contributors from across the spectrum of military analysts, like Dr. Glenn and RAND.⁵ The UWG completed its first phase, *Assessment*, and found many joint urban capabilities lacking or non-existent. Most pertinent to this chapter, it directed the creation of joint urban doctrine, with the Marines Corps in the lead, and the Army in a reviewing authority status.⁶ The Air Force was given responsibility for the present JUO Handbook to fill the gap in joint urban operational information for the JFC. Major Jeff Newell, on the UWG, was tasked to coordinate its production, and Mr. Barak Cohen and Mr. Paul Nagy hefted the research and writing responsibilities together.⁶ It will support the production of the prescriptive and authoritative *Doctrine for Joint Urban Operations, JP 3-06*, due to be published by 2001.⁷ Taking the concept to publication in two years is a remarkable feat. The JUO Handbook provides the JFC with a dearth of information to aid his efforts in planning, preparation, and execution of joint urban operations.

THE HANDBOOK FOR JOINT URBAN OPERATIONS

"When I took on this project for joint Urban Working Group, I had no idea how many eyebrows would be raised at an airman's leading of the effort."—Major Jeff Newell, USAF, J8 UWG, 1999 Urban Operations Conference.⁸

DESIGN

The JUO Handbook is designed to provide information to JFCs by way of four major headings: Introduction to Joint Urban Operations, The Operational Context of Joint Urban Operations, Planning Considerations for Joint Urban Operations, and Case Studies of Urban Operations. The work is comprehensive and immediately applicable. Each of the major sections builds on the other to provide a thorough understanding of the joint urban problem. The handbook is available on the web from the Joint Electronic Library (JEL) Website but not on the August 2000 JEL CD-ROM.

CONTENT

The handbook begins by giving the JFC a reference for its use. It quotes JP 3-0 in reminding the JFC that he must consider the handbook a tool in placing urban operations in the context of "preparation of the theater, isolation of the enemy, movement to attain operational reach, special operations, protection of forces and their freedom of action, control of space, and constant assessment of the physical environment."⁹ It walks the commander through two important reasons why urban operations affect the employment of joint forces. The first is "urban operations complicate military operations in ways that other environments do not", with the stated problems of *three-dimensional geography, large noncombatant populations, and the unique social, economic, cultural, political, and demographic signatures* for each urban area.¹⁰ The complication is "inherent complexity of urban areas yields numerous decisive points that a JFC can exploit in order to threaten the enemy's center of gravity", opening a discussion about military and non-military decisive points vulnerable to the JFC by different means.¹¹ These points

resonate from the discussion of current literature on urban operations. The handbook next seeks to define the “urban area” and operations in it for the commander. Joint Urban Operations are defined as:

Joint operations planned and conducted across the range of military operations on or against objectives on a topographical complex and its adjacent natural terrain where man-made construction and the density of noncombatants are the dominant features.¹²

This definition is critical step in urban operational awareness and acceptance. It is the first time in either service doctrine or joint doctrine that identifies noncombatants as a quantitative feature of the urban operation. The handbook further defines this concept in its definition of an “urban area”:

The urban area is defined as:

- (1) Population density equals or exceeds one thousand people per square mile (approximately three square kilometers).
- (2) An average of at least one building per every two acres.
- (3) A practical definition: any locale which man-made terrain and a large noncombatant population dominate operational considerations.¹³

This definition is potentially confusing to a JFC. First, if joint operations are operational, and the JUO handbook espouses this definition, it may be interpreted that as soon as the first two conditions in the definition are achieved, the responsibility for that area is immediately at the operational level of war. The third bullet is less restrictive and can apply across all levels of war. The issue becomes that by quantifying an urban area in a joint handbook and in future joint doctrine, the operational level commander will become responsible for all urban areas that meet the stated criteria. FM 90-10 equated urban size to responsible force and distorted the real considerations for urban operations, namely, the assigned mission in relation to the urban area.¹⁴ The handbook characterizes the role of urban operations in history—strategically located, symbolic political value, and important governmental nodes¹⁵—and continues with some inherent challenges to Joint Urban Operations. The list of challenges is:

1. Increasing urbanization rates.

2. Challenging terrain, shores, and waterways.
3. Presence of non-combatants.
4. Presence of civil government institutions.
5. Presence of NGOs.
6. Presence of local and international media.
7. Potential sources of host nation support.
8. Complex social, cultural, and governmental interaction supporting urban habitation.
9. Location of key transportation hubs.¹⁶

Immediately striking the reader is the combination of systemic and reductionist approach. The list is reminiscent of the McLaurin reports products, but addresses the socio-cultural side of the urban area, without reference to the relationships each plays to each other. The descriptions provided of each factor provide background but no analysis of the importance to the JFC. This discussion ends chapter one.

Chapter two is designed to place joint urban operations in an operational context. It is by far the most important of the next two chapters because it links the study to operational art and some themes of classic military theory. The chapter begins by defining urban combat as a subset of all urban operations which is a subset of military operations.¹⁷ This launches the reader into a discussion of urban operations within the context of the Principles of War!¹⁸ It is fascinating that the authors chose a classic body of principles to explain the urban operational phenomena. It clearly establishes a basis of reference for the JFC. The handbook proceeds to a discussion of the levels of war as they apply to joint urban operations, and at the operational level, the most important questions it suggests to the JFC is: "Does the political/military control of an urban area support the campaign plan? Is it required to achieve strategic objectives? If yes, what degree of control is required?"¹⁹ The discussion is critical because it defines the commitment of tactical forces into an urban environment as related to the strategic objectives. By way of defining "control", the handbook offers *isolating*, *retaining*, *containing*, *denying*, and *reducing*.²⁰ The only form of control linked to a terrain-based purpose on the list is retaining. All others define the joint force's purpose in relation to the enemy force's purpose. This is a very important leap forward from the "avoid or flatten" doctrine of the Cold War-era, which provided for deforesting

the urban jungle by military force. The discussion then turns to military operations other than war (MOOTW) in urban areas, and provides a comprehensive list of the MOOTW principles and types of MOOTW urban operations. One such operation, *raids and strikes* will be discussed later. Chapter two closes with a recap of urban operations at the operational level of war.

Chapter three is an important tool in the JFC's intellectual toolbox. It provides detailed analysis across a variety of topics *relevant to joint urban operations and not developed in service doctrine*. The topics range from characteristics of an urban area; information/intelligence activities; human intelligence (HUMINT) importance; command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) considerations; weapons of mass destruction (WMD) in urban operations; civil-military and interagency support; multinational considerations; and ends with operating as a joint team. This chapter is clearly a wealth of knowledge for a JTF staff and the associated functions that are unique to the operational level of war. It clearly reflects a tremendous effort in analyzing lessons learned, finding case studies for examples, and the contributions of various subject matter experts.

Chapter four contains the case studies in urban operations. The cases include Grozny, Chechnya; Panama City, Panama; Port-au-Prince, Haiti; Mogadishu, Somalia; Belfast, Northern Ireland; Sarajevo, Bosnia; and Monrovia, Liberia. The cases span the full spectrum of operations, and include some special operations as well as unique MOOTW situations, like the noncombatant evacuation (NEO) in Liberia. Each case includes an analysis of the specific issue that faced the commander by using a planning consideration—precision guided munitions, for example—from chapter three. Overall, it is a brief but informative collection of historical urban operations.

AN OPERATIONAL COMMANDER'S TOOL

The *Handbook for Joint Urban Operations* has filled a critical gap in defense department awareness of urban operations. It signals a momentum shift towards being capable across the joint force in future urban situations. The impetus of responsibility falls currently with the J8

Urban Working Group but the issues clearly have Chairman, Joint Chiefs of Staff (CJCS) visibility. Joint Force Commanders can now reference urban issues at their level of war to best apply all the participants in unified action. The handbook is a signpost directing joint doctrine towards an urban operations publication.

CHAPTER 4: GETTING THERE FIRST WITH THE MOST—THE ARMY RESPONDS TO THE FUTURE URBAN FIGHT

“In modern war strategical combinations will generally depend for their successful execution upon questions of time. The army which can mobilize, concentrate, and strike before the other is ready, can, usually, by keeping the initiative, push its strategical combinations to a successful issue, one after the other.”—Brevet Major William A Kobbe, 1896¹

STRATEGICALLY RESPONSIVE FORCES

What can strategically responsive Army forces contribute to the joint urban operation?

The new capstone manual for the Army, FM 3-0 (DRAG), suggests an Army-level mission essential task list (METL)². On the Army METL, one particular task—conduct forcible entry operations—discusses the ability for army forces to “gain access to contested areas from air, land, and sea”³. Within the army’s capabilities, it has proponency to conduct air assault and airborne force entry operations, and this requirement remains latent in the emerging objective force. The objective force will comprise the entire force, active and reserve/national guard, but interestingly, the active force will be divided into the “counterattack corps” and the non-counterattack corps brigades.⁴ The counterattack corps will contain three heavy divisions and an armored cavalry regiment, while the non-counterattack corps will retain the airborne and air assault forced-entry capabilities.⁵ Their role in future urban operations can leverage responsiveness with forced entry to provide the JFC with precious time, momentum, and capabilities to establish preliminary control over the urban area. This evolving form of *operational maneuver* is termed “strategic descent”, and bears further development. It can leverage the capabilities of the transforming Army to meet the challenges of the joint urban operation.

THE DESCENT IN CLASSIC THEORY

Baron Antoine Henri de Jomini introduced the idea descents in his book *The Art of War*. He defined them as “rarely found” and “among the most difficult in war when effected in presence of a well-prepared enemy”.⁶ The descent was an amphibious operation of the Napoleonic era, involving troop ships to land forces on an exposed flank or provide reinforcements to a main attack. The possibility of British descent constantly worried and frustrated Napoleon, especially after his own descent force was destroyed at the Battle of Trafalgar. But more important to the pursuit of modern urban operations are the tenets laid down by Jomini for the execution of descents. He stated:

Deceive the enemy as to the point of landing; choose a spot where the vessels may anchor in safety and the troops be landed together; infuse as much activity as possible into the operation; take possession of some strong point to cover the development of the troops as they land; and put on shore at once a part of the artillery, to give confidence and protection to the troops that have landed.⁷

When Jomini’s dictums are crosswalked with current concepts for the objective force, a remarkable similarity in the two emerges. The concept for the objective force in operations is simply stated as *develop the situation out of contact, maneuver forces out of contact, and conduct decisive combat operations at time and place of choosing*.⁸ These advantages are the same enjoyed by Jomini’s descent forces. The objective forces “arrive immediately behind forced entry forces and begin operations to shape the battlespace and expedite decision.”⁹ Dr. Spiller describes the use of “expeditions” in his essay on future urban operations as a tool to leverage dominance through emerging technology. He states that a strategic expedition takes on an “air of emergency” that galvanizes the public opinion, communicates a decision to act, and begins as a strategic operation.¹⁰ He noted that 104 of 215 expeditionary operations in the Army’s history have been urban in nature¹¹. By linking the theories of descent with capabilities of the future objective force, a new operational maneuver emerges for Army forces in joint urban operations.

USING THE DESCENT TO GAIN OPERATIONAL ADVANTAGE IN JOINT URBAN OPERATIONS

The JFC commander must attempt to achieve *operational advantage* over his opponent in the joint urban operation. FM 3-0 defines *operational advantage* is further refined to mean *surprise, shock, momentum and dominance*.¹² The strategic descent by objective forces must achieve these critical attributes to succeed as a form of maneuver.

Surprise is very difficult to achieve in 21st Century operations. It can be accomplished by acting or deciding faster than the opponent, maneuvering out of contact, or developing a new avenue of approach against the enemy. Surprise gained for urban operations generates several advantages. First, the defender must decide to act. If caught unprepared or in the midst of preparing, the defender may seek immediate decision through negotiation or delay the action by maneuvering away from the descent force. Both possibilities uncover the urban area and possibly enable a faster transition to stability operations. Next, surprise is critical to avoiding the transition of control of an urban area from civilian to military forces. Additionally, it does not allow the civilian populace time to spontaneously organize against the attacker, although this possibility is not completely negated. Finally, surprise can induce a cybernetic paralysis on the enemy. Unable to challenge the descent force, his command and control is paralyzed as the descent force flows into the urban area and seizes key nodes before the defender can determine their strategic value. Preventing surprise by the descent force would occur from several factors. The first the joint force can not achieve forced entry. Airborne forces give the descent force the most flexible forced entry option, but the requisite landing areas are needed to maintain the momentum of the descent. Next, the opponent may possess strategic C4ISR capability that detects the descent in enough time to negate its effects. Third, the public opinion concerning employment of force may delay the descent for enough time that the defender is well-prepared upon its arrival. Overall, surprise achieved by a descent force in urban operations gives the JFC a tremendous edge over his enemy and the possibility of decision without significant combat.

Shock is achieved in urban operations by dominant force and the destruction, control, or retention of centers of gravity. The objective force provides the JFC with a lethal punch. Combined with joint fires, the enemy must be a technologically advanced force to counter U.S. capabilities. As the objective forces closes from a position out of contact, the shock effect is multiplied by its survivability in the urban environment. Shock is also generated through overwhelming capabilities focused on decisive points and centers of gravity. The JFC commander can employ an array of operations in concert with ground forces to attack centers of gravity simultaneously. Aerospace forces, information operations, special purpose units, and joint forces extend the reach of the ground forces as they overwhelm key urban nodes. The descent forces objectives are generated prior to deployment to focus on these key nodes. Potential challenges are the fact that technological edge is blunted in an urban environment and the chance of not identifying the correct decisive points and centers of gravity.

Momentum is a force flow capability. The interim brigade combat team (IBCT) is designed to deliver its entire force in ninety-six hours and the interim division (IDIV) in five days.¹³ As the forced entry forces (airborne and special operations task force) clear the air points of debarkation (APODs), the objective force delivers the first forces directly into the battlespace. Intermediate staging bases are no longer necessary to marshall formations and organize them for movement into theater. The objective force establishes a force flow momentum that gives the JFC immediate operational capability in the urban environment. This incrementally increases his control over the urban area while avoiding a mass of forces which stage then maneuver into area as an unwieldy formation. The momentum of deployment carries the Army objective forces directly into and in range of the decisive points and nodes within the city.

Finally, *dominance* is a factor of capabilities available across the spectrum of operations and operational operating systems. The JFC achieves an immediate presence of mobile, armored, and lethal forces in *littoral* and *non-littoral* urban areas. The distinction is deliberate. Marine Corps service doctrine maintains that littoral urban areas are the emerging areas of concern for

future MOUT. However, non-littoral urban areas still exist in areas of increasing conflict. The Caspian Sea region, for example, contains a huge wealth of oil in close proximity to some of the most violent insurgent uprisings of the century. Access to ports on the Caspian is impossible, and air delivered armored platforms would be the most effective way of achieving operational advantage. The descent forces gain dominance by having a multitude of capabilities that may be negated singly but not in total. Forced entry forces deploy and create the conditions for the descent to occur in a place and at a time of the JFC's choosing. The enemy in an urban area may employ decentralized, small unit tactics to draw the operational force deeper into the urban area, as evidenced in Chechnya and Stalingrad. However, if the joint force is able to rapidly dominate a theater of operations with urban areas it can succeed in maintaining the initiative and avoid piecemeal commitment of the force.

Crediting Army Transformation, the strategic descent is now a viable option for the joint force commander to achieve advantage over the enemy in an urban operation. As a concept, it combines the strategic responsiveness of the objective force to execute operational maneuver from directly from CONUS, extending the operational reach of the joint force. The advantage attained may force action by an off-balance opponent who must respond more quickly than anticipated, or may force an immediate decision or cessation of hostile action before the duration becomes onerous for the JFC and erodes political will. From Jomini's time and the legacy of the British dominance of the seas, the strategic descent is the emerging role that Army forces can contribute to the joint urban operation.

CHAPTER 5: CONCLUSIONS AND POINTING THE WAY AHEAD

"If the political aims are small, the motives slight, and tensions low, a prudent general may look any way to avoid major crises and decisive actions, exploit any weaknesses in the opponent's military and political strategy, and finally reach a peaceful settlement. If his assumptions are sound and promise success, we are not entitled to criticize him. But he must never forget that he is moving on devious paths where the god of war may catch him unawares. He must always keep an eye on the opponent so that he does not, if the latter has taken up a sharp sword, approach him armed only with an ornamental rapier."—Clausewitz¹

Our Nation is at peace. Our economy is prosperous. We have strategic perspective and technological potential. This window of historic opportunity will grow narrower with each passing day. We can transform today in a time of peace and prosperity. Or we can try to change tomorrow on the eve of the next war, when the window has closed, our perspective has narrowed, and our potential limited by the press of time and the constraints of resources"—General Eric K. Shinseki, 2000-01 AUSA Greenbook²

CONCLUSIONS

The report has developed the concept of new roles for Army forces as part of the joint urban operation through several steps. The first was a comprehensive review of the body of current thought describing the modern urban operation. Links to classic military theorists were traced up to today's doctrine on MOUT. Next, a new handbook on joint urban operations was introduced for joint commanders in urban operations. This is emerging information to develop help joint staffs create synergy within the joint force operating on urbanized terrain. Preceding authoritative joint urban doctrine, the handbook demonstrates the remarkable energy and pace that urban operational awareness has gathered in the last decade. If properly maintained, the energy for developing future urban capabilities will be realized. Lastly, the study analyzed how the intersection of Army transformation forces and joint urban operations can create a new method of operational maneuver for JFCs. The strategic descent describes the capability of Army forces to strategically respond to crisis, gain momentum in deployment and achieve shock, surprise, and dominance within the urban battlespace. The objective forces in 2010 and beyond will realize the full potential of the strategic descent. Following necessary forced entry airborne or air assault forces, the objective force will immediately maneuver from APODs to assigned objectives. This provides the operational commander a tremendous *non-littoral* capability that Marines Corps units currently are unable to exploit. The descent also prevents the erosion of public and political will over time as the JFC seeks a more rapid decision and transition to peace under civilian control. It is the future *coup de main*³ capability resident in the Army's objective force.

FUTURE STUDY IN JOINT URBAN OPERATIONS

Future study in joint urban operations offers several opportunities. Researchers can select from a number of possible choices. The problem of joint urban operations will not diminish in the future. In context, the urban operations phenomenon may fill the vacancy provided by the departure of the Soviet threat as the paradigm threat model. It may also be transformed by the outcome and lessons learned by the next joint urban operation. Future research opportunities may include:

1. What changes in training strategies result from the joint urban operations doctrine, JP 3-06?
2. What role does information operations play in the strategic descent?
3. What types of special operations support the strategic descent?
4. How do current legacy, hybrid, and digitized forces conduct a strategic descent if required in a joint urban fight?
5. What changes types of exercises and training facilities are necessary to support preparation for conducting strategic descents in urban operations?

Many other questions may emerge that researchers and commentators can develop. The test of the JFC in the future urban operation is fast approaching—the rate of that approach, however, is still unknown. When called upon, joint urban operations may be the decisive factor in a strategic victory for our nation and our allies.

ENDNOTES

Chapter 1

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2. Louis Caldera and Eric K. Shinseki, "Army Vision: Soldiers on Point for the Nation...Persuasive in Peace, Invincible in War", *Military Review*, vol. LXXX, no. 5 (Sep-Oct 00), 3-5. Emphasis added by author.
3. Chairman of the Joint Chiefs of Staff, *Handbook for Joint Urban Operations*, (Washington, DC: The Joint Staff, 17 May 2000), 1-7. Hereafter cited as *JUO Handbook*.
4. Sean J. A. Edwards, *Mars Unmasked: The Changing Face of Urban Operations*, (Santa Monica, CA: RAND Arroyo Center, 2000): 40. Hereafter cited as Edwards. This is a baseline assumption in nearly all the references used in this study. It is one of the key planning factors presented in the *Handbook for Joint Urban Operations* (1-2).
5. Edwards, 45.
6. Ibid, 11-18, 35.
7. Ibid, 53.
8. Dr. Roger J. Spiller, the highly respected historian and George C. Marshall Chair holder in the Combat Studies Institute, U.S. Army Command and General Staff College is one such voice of reason in his unpublished essay, *Sharp Corners: Urban Conflict at Century's End* (Fort Leavenworth, KS: 2000), ii.
9. Caldera and Shinseki, 4. The other critical operational requirements sought by transformation are increased lethality, versatility, agility, survivability, and sustainability.
10. Department of the Army, *Field Manual 3-0, Operations (DRAG Edition)*, (Washington, DC: Department of the Army, 2000), 3-2. Listed as "Attributes of Strategically Responsive Forces."
11. Chairman of the Joint Chiefs of Staff, Joint Pub 3-0, Doctrine for Joint Operations, (Washington, DC, 1 Feb 95) provides the basis for understanding operational art for joint planners. Hereafter, it will be referred to as JP 3-0. Additionally, Joint Pub 5-0, Doctrine for Planning Joint Operations (Apr 95) continues to explain it as it applies to campaigns and operations.
12. Shimon Naveh, *In Pursuit of Military Excellence: The Evolution of Operational Theory*, (London: Frank Cass Publishers, 1997): 13.
13. Carl von Clausewitz, *On War*, Michael Howard and Peter Paret, translators and editors, (Princeton, NJ: Princeton University Press, 1976): 113.
14. Army Transformation Office, Deputy Chief of Staff for Operations (Army), Presentation by the Army Transformation Panel to the AUSA Convention, 17 Oct 2000, (Washington, DC: Department of the Army), 8. Hereafter cited as Transformation Report.
15. FM 3-0, 4-3.
16. Ibid.

Chapter 2

1. S.L.A. Marshall, *Notes on Urban Warfare*, (Aberdeen Proving Ground, MD: US Army Materiel Systems Analysis Agency, 1973), 3.

2. Dr. Roger Spiller, *Sharp Corners: Urban Warfare at Century's End*, (Fort Leavenworth, KS: unpublished urban warfare monograph, draft version, 2000), 86. Hereafter cited as Spiller.
3. Author's own count of a topic search request done by the Combined Arms Research Library (CARL) Staff, dated 24 July 2000.
4. Ibid.
5. Russell Glenn, *Combat in Hell: A Consideration of Constrained Urban Warfare*, (Santa Monica, CA: RAND Arroyo Center, 1996). Dr. Glenn is one of RAND's leading, if not *the* leading, authors and experts on urban operations—past, present, and future. His influence was noted in over 50% of the available references.
6. Brian J. Dunn, "The Path of the Future Army", *Military Review*, vol. LXXX, no. 5 (Sep-Oct 00), 91-93. He is one of the latest in commentators on the search for relevancy.
7. Baron Antoine de Jomini, *The Art of War*. J.D. Hittle, ed., in *Roots of Strategy, Book 2*, (Harrisburg, PA: Stackpole Books, 1987), 467.
8. Ibid.
9. Ibid.
10. Ibid, 466-468.
11. Ibid, 483.
12. Clausewitz, 206
13. Ibid.
14. Ibid, 207.
15. Ibid, 545.
16. Ibid, 546.
17. Ibid, 178. Ever the humanist, Clausewitz's commentary derides those who would reduce warfare into a few simple mathematical formulas for solving.
18. McLaurin, R.D., Paul Jureidini, David S. McDonald, and Kurt J. Sellers. *Modern Experience in City Combat*. (Aberdeen Proving Ground, MD: U.S. Army Human Engineering Laboratory, 1987).
19. Edwards, 39.
20. Ibid.
21. Steven P. Goligowski, *Operational Art and Military Operations on Urbanized Terrain*, (Fort Leavenworth, KS: Command and General Staff College, School of Advanced Military Studies, 1995), 30-31.
22. Ibid.
23. Richard M. Francey, *The Urban Anatomy: The Fundamentals of a City*, (Fort Leavenworth, KS: U. S. Army Command and General Staff College, School of Advanced Military Studies, 1995): 1-3.
24. Ibid.
25. Megahan, Rick. *Dragon in the City: Joint Power Projection and Joint Urban Operations—An Unavoidable Situation in the Near Future?*, Army War College Strategy Research Project, (Carlisle Barracks, PA: U. S. Army War College, 1999), 18.
26. Dr. Spiller's work is currently under review by the Commander, Combined Arms Center for final publication.
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28. Ibid.
29. Ibid, 87-90.
30. Ibid, 50.
31. Russell W. Glenn, ed. *The City's Many Faces: Proceedings from the RAND Arroyo—MCWL—J8 UWG Urban Operations Conference*, 13-14 Apr 99, (Santa Monica, CA: RAND, 2000), 46-49.
32. Ibid, 48

33. Ibid.
34. Michael Mehaffey, "Vanguard of the Objective Force". Military Review, vol. LXXX, no. 5 (Sep-Oct 00): 6-16.
35. Clausewitz, 120.
36. Russell W. Glenn, *Marching Under Darkening Skies: The American Military and the Impending Urban Operations Threat*,
37. Edwards, 3.
38. Ibid, 5. Mr. Edward's book is certainly the most recent RAND study to observe the problems with ROE in MOUT, but every single report referenced concludes this point as well.
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40. Mark Bowden. *Black Hawk Down*. (New York: Atlantic Monthly Press, 1999), 71-74.
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43. William R. Hawkins, "Putting Urban Warfare in a Strategic Context", (*Army Magazine*, Dec 99). <www.ansa.org/armyzine/hawkinsdec99.html>
44. Interview with Brigadier General (BG) David Huntoon, lead planner for OPN JUST CAUSE for XVIII Airborne Corps, (Fort Leavenworth, KS, 1 Nov 00). For BG Huntoon's role in the planning, see the excellent history by Thomas Donnelly, Margaret Roth, and Caleb Baker, *Operation Just Cause: The Storming of Panama*, (New York: Lexington Books, 1991). BG Huntoon is cited numerous times and his role in the planning well documented
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47. Department of the Army, *Field Manual 90-10-1, An Infantryman's Guide to Combat In Built-Up Areas*, (Washington, DC: Headquarters, Department of the Army, 1993), pp. 1-1 to 1-2. Hereafter cited as FM 90-10-1.
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50. FM 90-10-1, 1-2.
51. Edwards, 18-22.
52. James, 93.
53. Ibid, 2-8
54. Spiller, 7.
55. Ibid, 2-9.
56. Glenn, *The City's Many Faces*, 274.
57. Glenn, *Marching Under Darkening Skies*, viii.
58. Glenn, *The City's Many Faces*, 440.
59. Ibid, 443.
60. Ibid, 458.
61. Ibid, 59.
62. Spiller, 69.

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9. JUO Handbook, I-1.
10. Ibid, I-2.
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14. Department of the Army, *Field Manual 90-10, Military Operations on Urbanized Terrain (MOUT)*, (Washington, D.C.: Headquarters, Department of the Army, 1979), 2-8 to 2-9.
15. JUO Handbook, I-5.
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18. Ibid, II-3

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1. Harold W. Nelson, "Space and Time in On War", in *Clausewitz and Modern Strategy*, Michael I. Handel ed., (New York: Frank Cass & Co, 1996), 146.
2. FM 3-0, 1-4.
3. Ibid, 1-5.
4. Transformation Report, 8.
5. Ibid.
6. Jomini, 525.
7. Ibid, 526.
8. Mehafeffey, 7.
9. Ibid.
10. Spiller, 80-81.
11. Ibid, 82.
12. FM 3-0, 4-3.
18. Mehafeffey, 11.
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7. Ibid, 526.
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15. JUO Handbook, I-5.
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Chapter 5

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2. Transformation Report, 8.
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